

On page 7 of the specification, before the paragraph beginning with the words "Additionally, the sample...", please insert the following paragraph:

C2 Figs. 4-7 are flowcharts identifying the analytical system of this invention which uses computer assisted analysis largely as taught by the techniques of the referenced prior patents 6,297,044 and 6,284,482 which are incorporated herein by reference. The conducting of DNA ploidy determination is well known to those of skill in the art, and once atypical cells are selected using morphological techniques identified in the prior patents, the DNA ploidy analysis may then be determined on the selected atypical cells on a cell by cell basis. Figs. 4-6 present the analytical apparatus and system for conducting the above said analysis.

IN THE CLAIMS:

Please cancel claims 16, 17, 21 and 25.

Please amend claims 18, 19, 23, 24, 26, 27 as follows:

C3 Sub D1 18. (Amended) The system of claim 28, wherein the locations of said selected atypical cells are retrieved by said computer for DNA ploidy analysis on a cell by cell basis.

C4 19. (Twice Amended) The system of claim 18, wherein said system plots a histogram based of the DNA ploidy of said cell population.

C5 23. (Twice Amended) The system of claim 28, comprising the further examination of said selected atypical cells with molecular diagnostic techniques.

C6 24. (Amended) The system of claim 28, wherein said cell population is retrieved from epithelial tissue, wherein said brush means which removes said cell population from said tissue, said brush removing cells from at least two layers of said epithelial tissue.

C7 Sub D2 26. (Amended) The system of claim 24, wherein the location of said selected atypical cells are retrieved by said completer for DNA ploidy analysis by a pathologist on a cell by cell basis.

27. (Amended) The system of claim 24, comprising the further examination of said selected atypical cells with molecular diagnostic techniques.